

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-155042

(43)Date of publication of application : 09.06.1998

 (51)Int.Cl. H04M 15/02
 H04M 3/20
 H04M 15/00

 (21)Application number : 09-302044 (71)Applicant : PHILIPS ELECTRON NV
 (22)Date of filing : 04.11.1997 (72)Inventor : FLON STEPHANE

(30)Priority

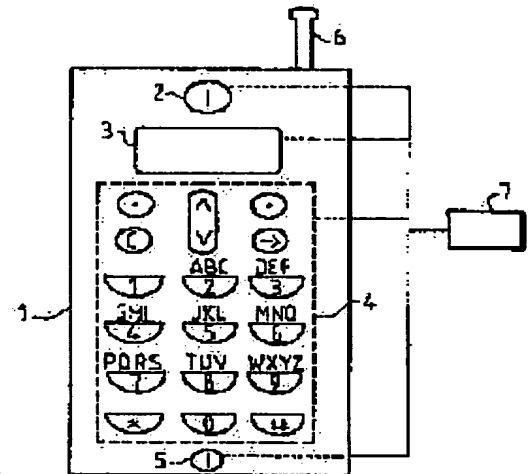
Priority number : 96 9613533 Priority date : 06.11.1996 Priority country : FR

(54) METHOD FOR LIMITING SPEECH DURATION OF PHONE CALL AND TELEPHONE SET TO EXECUTE THE METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a telephone set integrated with a cost limit means more simply executed and more simply carried out by the user of a telephone set by imposing a continuous period limit reference on each speech and assigning a maximum approved duration to each speech for the limit object and interrupting a speech when the duration elapses.

SOLUTION: The telephone set 1 is a mobile telephone set having a microprocessor 7 by which the method to control a speech cost is executed. Various reference is imposed on a limit a speech duration. At first a security code is dialed. For example, dialed information such as a duration per the speech period, a duration for a speech, a remaining time and an elapsed time is automatically stored in a memory of the microprocessor 7 in a form of a table or a variable. The moment when a content of a counter exceeds the limit of the speech duration, the speech at a current time is interrupted.



RCA A B PU000178
 CITED BY APPLICANT

LEGAL STATUS

[Date of request for examination] 02.11.2004

[Date of sending the examiner's decision of rejection] 28.11.2006

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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CLAIMS

[Claim(s)]

[Claim 1] The means which makes it possible to impose at least one independently applicable duration limit criteria to each message, The means which assigns the duration when max was approved to each message which forms the object of such a limit, Telephone which consists of a control means for controlling the cost of a message of a telephone characterized by consisting of a means which makes it possible to interrupt the message when the greatest duration assigned to the message passes.

[Claim 2] Telephone according to claim 1 characterized by a message consisting of a means to impose one duration limit criteria for every category, by whether it is one category determined with a called party's telephone number.

[Claim 3] Telephone according to claim 1 or 2 characterized by consisting of a means to have a telephone directory including record and to impose at least one duration limit criteria to one or more records of this telephone directory.

[Claim 4] It is [claim 1 characterized by to consist of a means initialize this message counter to each message which forms the object of a duration limit which has at least one counter called a message counter and the duration when max was approved, a means which carries out the decrement of this message counter as long as a message continues, and a display means display the value of this message counter thru/or] telephone given in any 1 term among 3.

[Claim 5] A means to set up at least one period, and a means to total the duration of the message for every category in this period, When a means to set up the duration when max was approved to this period, and the greatest duration assigned to this category to this period pass Telephone according to claim 2 characterized by consisting of a means which makes it possible to cut the means which makes it possible to interrupt the message belonging to this category, and the message which belongs to this category when the greatest duration assigned to this category to this period passes.

[Claim 6] How to control the cost of the message of a telephone characterized by to make it possible to interrupt a message when the greatest duration which imposed at least one independently applicable duration limit criteria to each message, assigned the duration when max was approved to each message which forms the object of such a limit, and was assigned to the message passes.

[Claim 7] The approach given in a claim characterized by imposing one duration limit criteria for every category by whether a message is one category determined with a called party's telephone number.

[Claim 8] The approach according to claim 6 or 7 characterized by being used by the telephone which has a telephone directory including record, and imposing at least one duration limit criteria to one or more records of this telephone directory.

[Claim 9] It is [claim 6 which initializes the counter called the message counter to each message which forms the object of a duration limit which has the duration when max was approved, carries out the decrement of this message counter as long as a message continues, and is characterized by displaying the value of this message counter thru/or] an approach given in any 1 term among 8.

[Claim 10] When the greatest duration which set up at least one period, totaled the duration of the message for every category in this period, set up the duration when max was approved to this period,

and was assigned to this category to this period passes The approach according to claim 7 characterized by making it possible to interrupt the message belonging to this category, and making it possible to cut the message belonging to this category when the greatest duration assigned to this category to this period passes.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical category to which invention belongs] This invention relates to the telephone which consists of a control means which controls the cost of a message of a telephone, and the approach of controlling the cost of a message of a telephone. Since the subscriber to a telephone network is able to control the cost of a message sent from its own telephone, this invention has very important application. This invention is advantageous especially when applied to the migration telephone by which various persons can be passed with the property.

[0002]

[Description of the Prior Art] British patent application 2nd for which it applied on January 21, 1989 227 The equipment connected to telephone by the telephone line at a serial is indicated by No. 905. This equipment makes it possible to set up the amount of the greatest sum total which must not be exceeded to no messages. This equipment displays the amount of the present **, and when the maximum amount set up beforehand is reached, telephone is disconnected to an outward message. The amount of the present ** is again initialized by the key.

[0003]

[Problem(s) to be Solved by the Invention] An above-mentioned device has various faults. First, this device needs additional equipment and can apply it only to telephone or cordless telephone with the conventional telephone line. Furthermore, although this device controls the cost of a telephone roughly and a limit is imposed based on the amount of a message, when change of the rate depending on the range of an operator and time amount etc. is given, processing well is comparatively complicated [this].

[0004]

[Means for Solving the Problem] This invention suits according to a user's needs, is carried out more simply, and aims at proposing the telephone with which the cost control means more simply performed by the user of telephone is unified. Therefore, the telephone by this invention explained in the paragraph of the beginning The means which makes it possible to impose at least one independently applicable duration limit criteria to each message, When the means which assigns the duration when max was approved to each message which forms the object of such a limit, and the greatest duration assigned to the message pass, it is characterized by consisting of a means which makes it possible to interrupt a message.

[0005] When the greatest duration which the approach of controlling the cost of a message of the telephone by this invention imposed at least one independently applicable duration limit criteria to each message, similarly assigned the duration when max was approved to each message which forms the object of such a limit, and was assigned to a message passes, it carries out making it possible to interrupt a message as the description.

[0006] According to this invention, control of cost is performed by imposing the easy message persistence time limit for whether processing doing. These limits make it possible to be applied based on

the criteria for every message which makes it possible to obtain more efficient control. Especially the telephone according to this invention at an advantageous example becomes one category as which the message was determined with a called party's telephone number from a means to impose one duration limit criteria to each category, a group, then when carrying out.

[0007] This invention makes it possible to restrict only the category of a certain message or to restrict various categories, such as a city call and an international message, separately in this way. In other advantageous examples of this invention, telephone has a telephone directory including record and consists of a means to impose at least one duration limit criteria to one or more records of the above-mentioned telephone directory.

[0008] It becomes from a means initialize the above-mentioned message counter to each message which forms the object of a duration limit which has at least one counter with which the telephone by this invention is called a message counter by the advantageous thing, and the duration when max was approved, the means which carries out the decrement of the above-mentioned message counter as long as a message continues, and a display means display the value of the above-mentioned message counter.

[0009] The user of telephone followed, the duration left behind before the message was cut at which time is known, and this improves the ease of use of telephone greatly. A means by which the telephone by this invention sets at least one period as the last in other advantageous examples, When a means to total the duration of the message for every category in the above-mentioned period, a means to set up the duration when max was approved to the above-mentioned period, and the greatest duration assigned to the above-mentioned category to the above-mentioned period pass It consists of a means which makes it possible to cut the means which makes it possible to interrupt the message belonging to the above-mentioned category, and the message which belongs to the above-mentioned category when the greatest duration assigned to the above-mentioned category to the above-mentioned period passes.

[0010] Every category and the sum total of the duration of a message for every period offer very big flexibility to use of telephone. This is an interesting thing especially in a special environment.

[0011]

[Embodiment of the Invention] **** and other fields of this invention will become clear with reference to the example explained below. Drawing 1 shows the telephone 1 by this invention as an example. Telephone 1 is a mobile phone which consists of a microprocessor 7 which ensures actuation of an earphone 2, a display 3, a keyboard 4, a microphone 5, an antenna 6, and telephone, and makes it possible to enforce the approach by this invention for controlling the cost of a message especially. For example, by the analog cellular type telephone by AMPS criteria, this microprocessor assembly surrounds 8051 microprocessors advantageously manufactured by Philips Semiconductors, and is formed.

[0012] The telephone explained as an example below contains the telephone directory which defines record. It can perform freely whether a user dials directly two approaches for sending a message, i.e., the telephone number which corresponds by the keyboard of telephone, or the record in a telephone directory is chosen. This telephone directory is memorized in the memory unit of the microprocessor assembly 7, and record is identified with the record number in a telephone directory.

[0013] Telephone has various functions with the controllable parameter with the menu displayed on a screen, and has one or more various functions to control the duration of a message especially again. As an example, the contents of the menu for controlling the duration of a message are shown below.

Control of a duration - > Message

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PRIOR ART

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TECHNICAL PROBLEM

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MEANS

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[0013] Telephone has various functions with the controllable parameter with the menu displayed on a screen, and has one or more various functions to control the duration of a message especially again. As an example, the contents of the menu for controlling the duration of a message are shown below. Control of a duration -> Message -> Duration per message -> Every category -> International -> The duration per message -> The duration per period -> District -> The duration per message -> The duration per period -> In the city -> Duration per message -> Duration per period -> Number -> Duration per message -> Duration per period -> Exception -> Number -> Alarm -> **/nothing -> Time amount -> Display under message -> Residual time -> In this example, a user has the selection which imposes various criteria about a limit of the duration of a message in this way progress time. It takes into consideration that they belong to categories (in the city, a district, international, etc.) with a message in consideration of the category to which a message belongs while these criteria make it possible to be independently imposed to each message. The limit defined for every category is applied to the duration of the sum total of a message of the category during the period (for example, a day, a week, the moon) which was based and applied for every message or was set up by the user. A user has similarly possibility of defining one or various numbers to the specific limit applied to the duration of the sum total of a message of the category during the period which was based and applied for every message or was set up.

[0014]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing showing the example of the telephone by this invention.

[Drawing 2] It is drawing showing the contents of the table on which various parameters about the already imposed limit are memorized.

[Drawing 3] It is drawing showing the contents of the table on which various parameters about the already imposed limit are memorized.

[Drawing 4] It is drawing which expresses the example of the approach by this invention with a flow chart.

[Description of Notations]

1 Telephone

2 Earphone

3 Display

4 Keyboard

5 Microphone

6 Antenna

7 Microprocessor

[Translation done.]

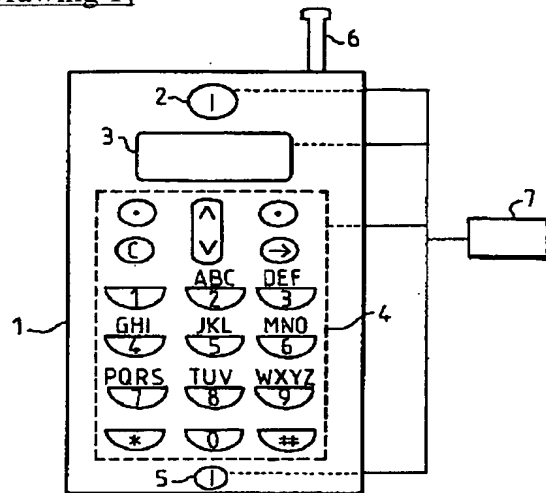
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DRAWINGS

[Drawing 1]



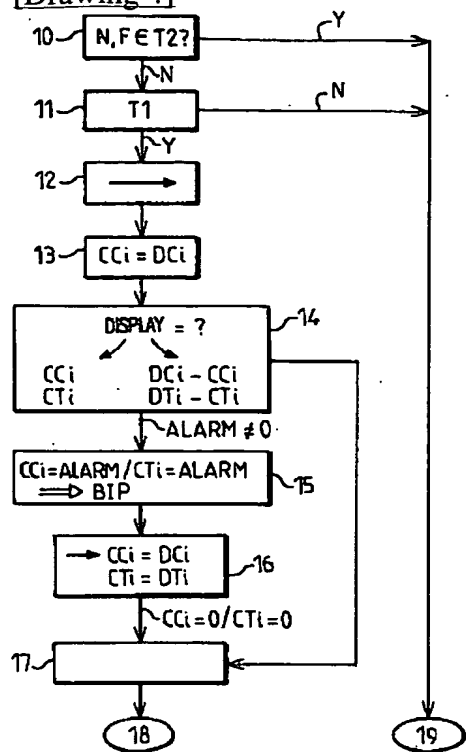
[Drawing 2]

	ON/OFF	DCi	CCi	DTi	Pi	CTi	CPi
0	OFF						
1	ON	180秒	---	3600秒	604800秒	---	---
2	ON	300秒	---				
3	ON	600秒	---				
083615	ON			900秒	604800秒		
N1	ON			300秒	86400秒		
N2	OFF						
F1	ON						
F2	ON						

[Drawing 3]

N3
N4
F3
F4
⋮

[Drawing 4]



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